

***The Healthy Families Program  
Health Status Assessment (PedsQL<sup>TM</sup>) Final Report***

***Revised September 2004***

***Managed Risk Medical Insurance Board***

## **EXECUTIVE SUMMARY**

The most significant achievement of the Healthy Families Program (HFP), California's State Children's Health Insurance Program (SCHIP), has been to increase access to medical services for children enrolled in the program. While it is reasonable to presume that improved access to care would affect the health status of children in a positive manner, only through a special project has MRMIB been able to document the connection between access to care and positive changes in health status. MRMIB implemented a longitudinal survey of families of children who were newly enrolled in the HFP in 2001 to measure changes in access to care and health status among these children over two years of enrollment.

Results from this project showed:

- Dramatic, sustained improvements in health status for the children in the poorest health and significant, sustained increases for these children in paying attention in class and keeping up in school activities.
- Meaningful improvement in health status for the population at large.
- Increased access to care and reduced foregone health care for children in the poorest health and the population at large.
- A lack of significant variation by race and language in reports of no foregone care--the most significant variable associated with access.

The most significant improvements occurred after one year of enrollment in the program. These gains were sustained through the second year of enrollment. Because the survey does not quantify all factors that are attributable to changes in health status, it is not known how much of an impact changes in access to care has on the overall changes seen in health status. It is also not known what the underlying health status is of the children participating in this survey. Therefore, the strongest conclusion and/or correlation that can be made regarding these results is that the HFP contributes to the improvements in health status by increasing access to health care services.

This report describes the project in detail and presents specific findings from the project.

## **BACKGROUND**

MRMIB conducted this project to fulfill a legislative mandate to report changes in health status among children enrolled in the Healthy Families

Program.<sup>1</sup> To measure changes in health status, MRMIB followed newly enrolled children over a two-year period. At the recommendation of the HFP Quality Improvement Work Group, MRMIB selected the Pediatric Quality of Life Inventory<sup>TM</sup> or PedsQL<sup>TM</sup> as the instrument to use to assess the health status of the children. The PedsQL<sup>TM</sup> is a short questionnaire, consisting of 23 questions that address physical and psychosocial aspects of health. The questionnaire was selected because of its brevity, ease in completion, and use in broad age groups (ages 2 through 18). The developers of the PedsQL<sup>TM</sup> questionnaire have also used the questionnaire in Medicaid and commercial populations in California. Research has shown that self-assessment is an acceptable method for measuring health status among populations.<sup>2,3,4</sup> Prior research on the PedsQL<sup>TM</sup> has demonstrated a consistent difference in health status scores between healthy children and children with chronic health conditions such as asthma, arthritis, cancer and diabetes. Healthy children have been shown to have significantly higher scores than children with clinically diagnosed chronic conditions<sup>5</sup>.

### **The Survey Process**

The survey was conducted by mailing the PedsQL<sup>TM</sup> to the families of approximately 20,000 HFP children who were newly enrolled in the program during the months of February and March 2001. Questionnaires were mailed to families during their first month of enrollment. Families received the survey in either English, Spanish, Vietnamese, Korean, or Chinese based on the primary language indicated on each family's HFP application. Each family received prior notification of the questionnaire during a welcome call they received from the HFP administrative vendor. In addition to the pre-notification call and the initial questionnaire, reminder post cards and a second questionnaire were mailed to non-responders. If the questionnaire was not returned after the second mailing, a follow-up call was made. Families who remained on the program as of February and March 2002 (6,881) and February and March 2003 (4,952) were sent a second and third survey. For each family, one child in the household was selected as the subject for the survey; a parent and the subject (if 5 years or older) were each given a questionnaire to complete.

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<sup>1</sup> California Insurance Code, Section 12693.92

<sup>2</sup> McHorney CA, Ware JE, Raczek AE. The MOS 36-item short-form health survey (SF-36): II. Psychometric and clinical tests of validity in measuring physical and mental health constructs. *Medical Care* 1993;31(3):247-263.

<sup>3</sup> McHorney CA, Ware JE, Jr., Lu JF, Sherbourne CD. The MOS 36-item Short-Form Health Survey (SF-36): III. Tests of data quality, scaling assumptions, and reliability across diverse patient groups. *Medical Care* 1994;32(1):40-66.

<sup>4</sup> Eisen M, Donald CA, Ware JE, Brook RH. Conceptualization and measurement of health for children in the health insurance study. Santa Monica, CA: RAND; 1980.

<sup>5</sup> Varni, J.W., Seid, M., Kurtin, P.S.; Peds QL<sup>TM</sup> 4.0: Reliability and validity of the Pediatric Quality of Life Inventory Version 4.0--Generic Core Scales in healthy and patient populations. *Medical Care* 39(8) 800-812.

### **The PedsQL™ Questionnaire**

The PedsQL™ Questionnaire contains 23 core questions that address the physical and psychosocial aspects of health. With respect to the psychosocial aspect of health, the questionnaire examines social, emotional, and school functioning. For each aspect of health, survey participants are asked to rate how much of a problem five to eight “items” have been in the past 30 days.

The questionnaire varies slightly among four age groups to ensure that items asked are developmentally appropriate. The questionnaire is administered to young children (ages 5 to 7), children (ages 8 to 12) and adolescents (ages 13 to 18). The questionnaire is also administered to parents of children ages 2 to 4 years (toddlers), young children (ages 5 to 7), children (ages 8 to 12) and adolescents (ages 13 to 18).

The questionnaire asks survey participants to respond using a 5-point scale indicating how much of a problem each item has been during the past month. The scale is designed so that 0 is never a problem, 1 is almost never a problem; 2 is sometimes a problem; 3 is often a problem and 4 is almost always a problem. For very young children (ages 5 to 7 years) the numerical scale is replaced with a scale of smiley faces. Parents are asked to assist their very young children (ages 5 to 7) in completing the questionnaire by having the child assign a smiley face. A copy of the questionnaire is included in Exhibit A.

The PedsQL™ Questionnaire was supplemented for use in the Healthy Families Program by including 13 additional questions regarding access to care and chronic illness. Access related items included: the presence of a personal physician, foregone health care, and problems getting care. These additional questions were included to assess changes in access to care.

The additional survey items were adapted from the PedsQL™ Family Information Form<sup>6</sup>, the Consumer Assessment of Health Plans Study (CAHPS™)<sup>7</sup> (a measure of health plan performance from the consumer’s perspective), and a study examining foregone care among adolescents<sup>8</sup>.

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<sup>6</sup> Varni JW, Seid M, Kurtin PS. PedsQL 4.0: Reliability and Validity of the Pediatric Quality of Life Inventory Version 4.0 Generic Core Scales in Healthy and Patient Populations. *Medical Care*. 2001;39(8):800-812.

<sup>7</sup> Hays RD, Shaul JA, Williams VS, et al. Psychometric properties of the CAHPS 1.0 survey measures. Consumer Assessment of Health Plans Study. *Medical Care*. 1999;37(3 Suppl):MS22-31.

<sup>8</sup> Ford CA, Bearman PS, Moody J. Foregone health care among adolescents. *JAMA* 1999;282(23):2227-34.

### **Calculation of Health Status Scores**

Each response received from survey participants is reverse scored and linearly transformed to a 100 point scale where 0 becomes 100 points, 1 becomes 75 points, 2 becomes 50 points, 3 becomes 25 points and 4 becomes 0 points. The higher the score, the better the health related quality of life. Three summary scores are calculated for each completed questionnaire. The Total Score (all 23 items) is computed as the mean of the item responses divided by the number of items answered in the Physical and Psychosocial sub-scales. The Physical Score is the mean of the item responses for that aspect of health. The Psychosocial Health Score is calculated by summing the item responses for the Emotional, Social and School functions scales and dividing by the number of items answered. Based on previous studies using the PedsQL, children in good health have scores around 83. Children in poor health have scores in the mid-60s to low 70s.<sup>9</sup>

## **RESULTS**

### **Response Rates**

The results of the survey are based on a significant number of surveys that had been returned by parents over the 2 years of the project. Because each year approximately 30 percent of children do not re-enroll in the program for various reasons, the total sample for 2002 and 2003 declined from 2001. At the beginning of the project, approximately 20,000 surveys were mailed to newly enrolled HFP subscribers and their caregivers. By the end of the project, survey data was available on 3,738 children who had remained enrolled in the program from 2001 through 2003 and had completed the three surveys. The researchers view the response rates for each year as quite robust and of more than adequate size on which to base conclusions. Table 1 shows the disposition of the sample from 2001 through 2003.

Table 1: Disposition of Sample from 2001 through 2003

Year of Survey	Total Sample	Total Surveys Returned	Response Rates	Number of children leaving HFP at the end of the year
2001	20,000	10,241	51.2%	3,360
2002	6,881	6,005	87.3%	1,929
2003	4,952	3,738	75.5%	-----

Over the two year period, the response rates among age, ethnic and language groups remained constant. For all three surveys, the distribution

<sup>9</sup> Varni, J.W., Burwinkle, T.M., Katz, E.R., Meeske, K., & Dickinson, P. (2002). The PedsQL\* in pediatric cancer: Reliability and validity of the Pediatric Quality of Life Inventory\* Generic Core Scales, Multidimensional Fatigue Scale, and Cancer Module. *Cancer*. 94, 2090-2106.

of returned surveys among ethnic and language groups was consistent with the ethnicity and language distribution of the total HFP population.

However, response rates within ethnic and language groups differed. Among the three surveys, Latino parents were more likely to complete the survey; African American parents were less likely to complete the survey.

With respect to the five language groups, English respondents were less likely to complete the survey, while Spanish respondents were more likely in 2001 and 2002 to complete the survey. For 2003, results revealed that Korean and Vietnamese respondents were more likely to complete the survey.

Among the age groups, parents of toddlers were more likely to return the surveys in 2001. For the 2002 and 2003 surveys, the response rates across age groups were very similar. Table 2 shows the response rates by age, language and ethnicity.

Table 2: Response rates by age, language, and ethnicity

	<b>Baseline (2001)</b>		<b>Year 1 (2002)</b>		<b>Year 2 (2003)</b>	
	Response Rate	Percent of Sample	Response Rate	Percent of Sample	Response Rate	Percent of Sample
<b>AGE</b>						
Toddler (2-4)	59%	30.5%	89%	19.5%	74%	11.1%
Young Child (5-7)	48%	24.3%	87%	26.0%	75%	24.4%
Child (8-12)	50%	31.4%	87%	35.2%	77%	39.6%
Adolescent (13-18)*	47%	13.8%	87%	19.6%	75%	24.9%
<b>LANGUAGE†</b>						
English	44%	43.0%	83%	38.6%	69%	36.1%
Spanish	58%	50.7%	91%	53.9%	79%	55.5%
Chinese	58%	3.3%	84%	1.43%	78%	1.5%
Korean	55%	1.7%	85%	2.31%	84%	1.9%
Vietnamese	56%	1.4%	85%	3.98%	82%	5.0%
<b>ETHNICITY</b>						
White	46%	13.7%	82%	12.6%	68%	11.2%
Latino	53%	61.5%	89%	62.2%	76%	62.3%
African America	37%	2.3%	79%	1.92%	66%	1.8%
Asian/Pacific Islander	54%	11.8%	82%	13.4%	79%	14.0%
Native American	46%	0.4%	89%	0.4%	83%	0.51%
Not Reported	50%	10.3%	85%	9.84%	77%	10.3%

\* Because the project followed children for 2 years, and because children are no longer eligible for the program at age 19, the Baseline survey was only distributed to families with newly enrolled children who were ages 2 through 16.

† Language refers to language of the questionnaire

### **Health Status Scores at Baseline**

The Baseline survey showed the mean parent proxy score for the HFP population surveyed was 81.38. Scores for the sub-scales ranged from

76.91 to 82.15. Given that prior research on the PedsQL™ shows that healthy children, on average, have a score of 83, the HFP results suggest that children newly enrolled in the HFP are generally healthy. Table 3 displays the Baseline scores calculated from parent responses.

Table 3: Baseline PedsQL™ Scores from Parent Reports

Scale	Score	Standard. Deviation.
Total	81.38	15.90
Physical	83.26	19.98
Psychosocial	80.25	15.82
Emotional Functioning	80.28	16.99
Social Functioning	82.15	20.08
School Functioning	76.91	20.16

A review of baseline scores by age, language and ethnicity reveals minor differences in scores in most cases. The widest range of scores appeared among age and language groups. Among the age groups, toddlers had the highest score. Among language groups, Vietnamese respondents had the highest score and Spanish respondents had the lowest scores. The scores among ethnic groups were less varied. Table 4 displays the scores among age, language and ethnic groups.

Table 4: Baseline PedsQL™ Scores from Parent Reports by Age, Language and Ethnicity

	Baseline Score	Standard Deviation
<b>Age</b>		
Toddler (2-4)	87.47	12.44
Young Child (5-9)	78.05	16.44
Child (8-12)	78.88	16.60
Adolescent (13-16)	79.48	16.38
<b>Language</b>		
Spanish	79.23	17.12
English	83.49	14.18
Chinese	83.22	13.91
Korean	82.88	15.82
Vietnamese	87.35	15.57
<b>Ethnicity</b>		
White	84.53	13.40
Latino	80.44	16.45
African American	82.90	13.63
Asian/Pacific Islander	82.32	15.70
Native American	83.75	15.79
Not Reported	81.17	15.77

### **Health Status Scores at Year 1 and Year 2**

Because the overall survey population was healthy at Baseline, and remained so at Year 1 and Year 2, researchers focused the analysis of changes in health status on children who were at risk. Researchers defined "at risk" as those children who, by parent report, had scores in the lowest 25 percent of all PedsQL scores. At Baseline this comprised 2,481

children. At Year 1, 1,459 of these children remained on the program and at Year 2, there were 925 such children left in the sample. The distribution of ethnic and language groups between children with scores in the lowest quartile and children with scores in the top three quartiles were similar, with some exceptions. There was a higher percentage of Latino children (as a percentage of the total baseline population) in the lowest quartile compared to the top three quartiles. White children were more likely to be in the top three quartiles than in the lowest quartile. English respondents were less likely to be in the lowest quartile, while non-English respondents were more likely to be in the lowest quartile. Table 5 displays the ethnic and language distribution of scores between the lowest and top three quartiles.

Table 5: Ethnic and language distribution of children in the lowest and top three quartiles at Baseline

	Lowest Quartile at Baseline (total = 1,459)	Top Three Quartiles at Baseline (total = 8,782)
<b>Ethnicity</b>		
White	8.1%	14.2%
Latino	66.8%	61.2%
African American	1.1%	2.2%
Asian/Pacific Islander	13.2%	12.2%
Native American	0.3%	0.4%
Not Reported	10.5%	9.7%
<b>Language</b>		
English	29.1%	42.7%
Spanish, Vietnamese, Korean, Chinese	70.9%	57.3%

Scores for children who were in the lowest quartile at Baseline (with scores at or below 71.74) and enrolled in the program for two years showed dramatic improvement from Baseline to Year 1. The largest increase in scores was seen in the physical and social scales. There was no significant change seen from Year 1 to Year 2 as shown in Table 6, suggesting that these improvements were sustained over time. As a point of reference, a 4.5 point difference in scores is associated with a clinical change in health status that is noticeable by a parent.

It is possible that some improvement in measured health status for the lowest rank quartile would have occurred over time regardless of children's participation in Healthy Families. However, the dramatic improvement in score, of more than 12 points, is material.



Table 6: Changes in PedsQL™ Scores from Baseline to Year 1 and Year 2 in Children with Baseline Scores in the Lowest Quartile

Scores	Baseline n= 862*	Year 1	Change from Baseline to Year 1	Year 2	Change from Year 1 to Year 2	Net Change
Total	58.26	71.27	13.01	70.70	-0.57	12.44
(Std. Dev.)	(9.33)	(16.73)	-----	(17.01)	-----	----
Physical	54.51	70.84	16.33	71.15	.31	16.64
(Std. Dev.)	(17.88)	(22.71)	-----	(22.92)	-----	----
Psychosocial	60.31	71.00	10.69	70.41	-0.59	10.10
(Std. Dev.)	10.48	16.53	-----	16.46	-----	----
Emotional	66.67	72.05	5.38	71.73	-0.32	5.06
(Std.Dev.)	18.28	18.75	----	18.62	----	----
Social	57.37	71.59	14.22	72.12	0.53	14.75
(Std.Dev.)	16.82	22.58	----	21.71	----	----
School	55.65	68.45	12.80	67.05	-1.40	11.40
(Std.Dev.)	15.33	20.62	----	20.30	----	----

\*Number shown reflects the number of completed parent PedsQL™ reports received  
Differences in scores from Baseline to Year 1 are statistically significant.

### **Changes in Health Status Scores for Adolescents (ages 13 and older at baseline) in the lowest quartile**

For the Year 1 report, researchers conducted an analysis to look at changes in scores among adolescents from Baseline to Year 1. The results showed that adolescents had scores that were not significantly different from all age groups. Also of note is that the changes in scores from Baseline to Year 1 for the adolescents in the lowest quartile was a dramatic improvement from Baseline and similar to that seen for all ages. Again, some improvement in health status for the lowest ranked quartile could occur over time regardless of participation in HFP. However, 12 points is a dramatic, and material improvement.

Table 7: Changes in PedsQL Total Scale scores for adolescents from Baseline to Year 1 for adolescents based on parent report

Quartiles	Baseline	Year 1	Change
Lowest Quartile - Adolescents	58.2	70.6	12.4
Lowest Quartile - All Ages	58.0	71.7	13.7
All Quartiles- Adolescents	79.7	80.9	1.2
All Quartiles - All Ages	81.3	81.3	0.0

Differences in scores within the lowest quartile are significant.

There was no significant change seen from Year 1 to Year 2 , suggesting that these improvements sustained over time. The largest increase in scores was seen in the physical and social scales.

Table 8: Changes in PedsQL Total Scale scores for adolescents in the lowest quartile from Baseline to Year 1 and Year 2 for adolescents based on parent report

Scores	Baseline n=144	Year 1	Change from Baseline to Year 1	Year 2	Change from Year 1 to Year 2	Net Change
Total	59.06	70.90	<b>11.84</b>	69.92	-0.98	10.86
(Std. Dev.)	(9.65)	(16.28)	-----	(17.03)	-----	----
Physical	58.28	71.28	<b>13.00</b>	70.87	-0.41	12.59
(Std. Dev.)	(18.78)	(21.70)	-----	(23.32)	-----	----
Psychosocial	59.44	70.51	<b>11.07</b>	69.45	-1.06	10.01
(Std. Dev.)	(10.48)	(16.53)	-----	(16.46)	-----	----
Emotional	63.43	69.92	<b>6.49</b>	69.87	-0.05	6.44
(Std.Dev.)	(20.54)	(20.33)	----	(20.60)	----	----
Social	59.45	75.25	<b>15.80</b>	73.84	-1.41	14.39
(Std.Dev.)	(16.82)	(22.58)	----	(21.71)	----	----
School	55.29	66.10	<b>10.81</b>	65.13	-0.97	9.84
(Std.Dev.)	(16.31)	(21.22)	----	(20.30)	----	----

Differences in scores from Baseline to Year 1 are significant.

### **Changes in Health Status Scores in Children Reported to Have a Chronic Condition**

Results from the Baseline survey revealed that most children did not report a chronic condition. Children who had a reported chronic condition totaled 831, while children without a reported chronic condition totaled 8,709. The types of chronic conditions that were reported on the questionnaires included asthma, Attention Deficit Hyperactivity Disorder (ADHD) and depression. For the surveys conducted in 2002 and 2003, the proportion of children with a reported chronic medical condition remained consistent with the proportion that was seen at Baseline. Because the population surveyed was stable during the life-span of the project, changes in PedsQL scores are not attributable to shifts in the population.

In examining the differences in health status scores between those children who reported a chronic condition and those who did not, the difference in the Baseline scores was 9.14 points, which the researchers consider to be clinically significant. The subscale with the most significant difference was the school functioning subscale. Table 9 displays the Baseline scores for children with and without a reported chronic condition.

Table 9: Baseline scores for children with and without a reported chronic condition

Scale	Did not report a chronic condition	Reported a chronic condition
Total	82.32	73.18
Physical	84.08	76.99
Psychosocial Health	81.27	71.08
Emotional Functioning	81.20	71.08
Social Functioning	83.05	75.06
School Functioning	78.27	65.58

Table 10 shows the changes in the scores for children with chronic health conditions and scores in the lowest quartile at baseline. When looking at baseline scores for children in the lowest quartile with and without a reported chronic condition and changes from Year 1 to Year 2, we see that the most significant change occurred in physical and school functioning. Children without a reported condition had bigger increases in their scores although all scores for children with chronic conditions showed clinically significant improvement. Children with chronic conditions showed remarkable increases in social and school functioning from Year 1 to Year 2.

Table 10a: Changes in scores for children in the lowest quartile at baseline who had a reported chronic condition

Scale	Baseline	Year 1	Change	Year 2	Change	Net Change
Total	58.79	65.62	6.83	67.93	2.31	9.14
Physical	61.02	68.38	7.36	71.72	3.34	10.70
Psychosocial	57.63	63.75	6.12	65.83	2.08	8.20
Emotional Functioning	59.93	63.18	3.25	64.11	0.93	4.18
Social Functioning	57.63	63.75	6.12	65.83	2.08	8.20
School Functioning	53.17	63.09	9.92	62.53	-0.56	9.36

Differences in scores from Baseline to Year 1 are significant.

Table 10b: Changes in scores for children in the lowest quartile at Baseline who did not have a reported chronic condition

Scale	Baseline	Year 1	Change	Year 2	Change	Net Change
Total	58.25	72.21	13.96	71.38	-0.83	13.13
Physical	53.98	71.37	17.39	71.58	0.21	17.60
Psychosocial	60.70	72.17	11.47	71.31	-0.86	10.61
Emotional Functioning	67.61	73.52	5.91	73.04	-0.48	5.43
Social Functioning	60.70	72.17	11.47	71.31	-0.86	10.61
School Functioning	56.24	69.58	13.34	68.03	-1.55	11.79

Differences in scores from Baseline to Year 1 are significant.

### **Changes in School Functioning for the Sickest Children**

A closer look at the individual items that constitute the school functioning subscales reveals significant improvement in PedsQL™ scores for children with scores in the lowest quartile. Table 11 shows the changes in school functioning. As seen generally in the survey results, the largest change occurred from the Baseline survey to Year 1, but these changes were sustained through Year 2. The items with the largest increase were paying attention at school and keeping up in school activities. Although the scores had an insignificant decrease from Year 1 to Year 2, the net change in scores was positive. For certain items, the increase is so

great (paying attention in class, keeping up in school activities) as to show a material effect despite the likelihood that some improvement would have occurred over time regardless of participation in HFP.

Table 11: Changes in PedsQL™ School Functioning Subscale Items for children in the lowest quartile at Baseline.

Subscale Items	Baseline	Year 1	Change	Year 2	Change	Net Change
Paying attention in class	35.00	56.91	21.91	55.13	-1.78	20.13
Forgetting things	60.70	68.50	7.80	66.35	-2.15	5.65
Keeping up in school activities	36.33	59.55	23.22	59.08	-0.47	22.75
Missing school because of not feeling well	72.79	78.18	5.39	77.43	-0.75	4.64
Missing school to go to the doctor or hospital	72.46	77.73	5.27	76.35	-1.38	3.89

Differences in scores from Baseline to Year 1 are significant.

### **Access to Care**

The modified PedsQL™ questionnaire contained three key questions related to access to care. Each parent was asked: (1) Whether their child had a personal physician in the preceding 12 months; (2) Whether their child had no problems getting the care they or their doctor felt necessary (problems getting needed care); and (3) Whether they received the care they needed (foregone health care). The rates for these items increased from Baseline to Year 1 and were sustained from Year 1 to Year 2. The largest increase seen (11.3 percentage points) was for families reporting the presence of a regular physician from Baseline to Year 1. The second largest increase was seen in families reporting no foregone care, the variable researchers believe is the best proxy for access. At Baseline, 84 percent of families reported no foregone care, but by Year 2, 92 percent reported no foregone care. There were some changes in families reporting no problems getting care. At Baseline, 80.2 percent of families reported no problems, and by Year 1 it was up to 83.7 percent.

Table 12: Access over time: The percent of sample reporting the presence of a regular physician, the absence of problems getting care, and foregoing care.

Access	Baseline	Year 1	Year 2
Regular Physician	55.7%	66.4%	66.2%
No Problems Getting Care	80.2%	83.7%	83.8%
No Foregone Health Care	84.0%	91.3%	92.4%

Differences from Baseline to Year 1 are statistically significant. Difference from Year 1 to Year 2 are not significant.

In looking at the changes in having a regular physician among ethnic and language groups, African American children (16.4 percentage points) had the largest increase followed by Latino children (12.7 percentage points). Asian/Pacific Island children showed the least change (4.6 percentage points). Spanish-language respondents showed the largest increase (12.6 percentage points) followed by English-language respondents.

Table 13: The percent of sample reporting the presence of a regular physician by ethnicity and language at Baseline, Year 1, and Year 2

Ethnicity	Baseline	Year 1	Year 2
White	74.3%	82.6%	83.4%
Latino	49.2%	62.3%	61.6%
African American	69.8%	84.2%	86.2%
Asian/Pacific Islander	65.7%	70.0%	69.1%
Language			
English	70.0%	79.9%	78.3%
Spanish	45.2%	58.4%	57.8%
Vietnamese	37.5%	26.5%	30.3%
Korean	48.6%	53.1%	52.2%
Chinese	74.7%	74.7%	81.5%

With respect to the percent of children reporting no problems getting care, the largest increase from Baseline to Year 2 was seen in African American children. Spanish speaking families had the largest change among the five language groups.

Table 14: The percent of sample reporting no problems getting care by ethnicity and language at Baseline, Year 1 and Year 2

Ethnicity	Baseline	Year 1	Year 2
White	87.9%	87.9%	87.7%
Latino	81.1%	84.7%	84.9%
African American	78.8%	84.5%	84.8%
Asian/Pacific Islander	75.0%	77.5%	76.6%
Language			
English	81.5%	83.9%	84.4%
Spanish	80.0%	84.7%	84.8%
Vietnamese	62.5%	62.0%	63.5%
Korean	83.9%	75.0%	80.0%
Chinese	76.8%	79.5%	75.1%

Changes in the percent of children reporting no foregone health care were more dramatic than the changes seen in no problems getting health care. African American and Asian/Pacific Islander children had an increase of over 10 percentage points. Vietnamese language respondents had an increase of 12 percentage points.

Table 15: The percent of sample reporting no foregone care by ethnicity and language at Baseline, Year 1, and Year 2

Ethnicity	Baseline	Year 1	Year 2
White	86.8%	91.5%	93.9%
Latino	84.1%	91.7%	91.9%
African American	83.3%	94.8%	93.9%
Asian/Pacific Islander	83.1%	89.1%	93.3%
Language			
English	84.4%	91.7%	93.3%
Spanish	83.5%	91.2%	91.6%
Vietnamese	80.7%	90.4%	92.6%
Korean	87.0%	92.1%	92.8%
Chinese	86.2%	89.3%	94.4%

Baseline responses received from parents of children with scores in the lowest quartile were most different for problems getting care and foregone care. Children in the lowest quartile had less improvement than children in the top three quartiles, but still significant improvement. Table 16 shows the changes in results for children that continued to be enrolled in the program for 2 years.

Table 16: Changes in presence of a personal physician, problems getting needed care and foregone health care for children with scores in the lowest and top three quartiles at Baseline who remained in the program for 2 years

	Lowest Quartile			Top Three Quartiles		
	Baseline	Year 1	Year 2	Baseline	Year 1	Year 2
Child had a personal physician						
Yes	52.4%	61.6%	60.7%	58.4%	69.0%	68.0%
Child had problems getting needed care						
Yes	29.0%	23.0%	22.0%	18.4%	15.7%	14.4%
Foregone health care						
Yes	25.0%	14.9%	12.1%	15.3%	7.5%	6.2%

Differences in scores from Baseline to Year 1 are significant.

### **Discussion**

The results from this project strongly support the benefits the HFP provides to uninsured children. Access to care increases significantly for all children, including children who are in the most need of medical care. Reported health related quality of life and improvements in school performance for children who are in the poorest health also increase dramatically. Data show variation by race and language by parents reporting the presence of a regular physician and, to a lesser degree, by parents reporting no problems getting care. Virtually no variation occurs by race/language in reports of foregone care--the most important variable associated with access. The largest change in access and in health related quality of life occurred from the Baseline year to Year 1. Gains realized were sustained through Year 2.

There are other factors that may contribute to changes in the health related quality of life which this project could not measure. Factors such as changes in the child's environment and the quality of care provided play a role in whether (or how much) a child's quality of life improves. Aside from these factors, however, analysis conducted by the researchers suggest that access to care, specifically, reductions in foregone care, are important contributors to the improvement in health related quality of life. This is especially true for children who are in the poorest health at the time of initial enrollment in the HFP.

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